NovaUltra™ Golgi-Cox Stain Kit

Ready To Use

Catalog Number	IW-3023	
Size	1 Kit	
Components	Golgi-Cox Solution	250 ml
	Post-Impregnation Solution	250 ml
Storage	Store at room temperature in dark for up to 12 months	

Description

The Golgi-Cox Kit is designed for the staining of neuronal dendrites and dendritic spines on fresh or paraformaldehyde fixed brain tissues. The Kit has been extensively tested on both fresh and paraformaldehyde fixed brain tissues in rats and mice and should work on other species as well. The impregnation will take 10-14 days depending on the age and size of the tissues. The Kit only contains two ready-to-use reagents and the protocol is easy to follow and the staining quality is excellent.

Procedure

1. **The kit is suitable for both fresh tissues and fixed tissues.**
    a. **Fresh Tissues**: Immerse the fresh harvested, unfixed brain tissues in the **Golgi-Cox Solution** and store in a tightly sealed glass or plastic jar stored in dark at room temperature for 1-2 days. The volume of the solution should be approximately 10 times of volume of the tissue block.
    b. **Fixed Tissues**: It is recommended to use perfuse fixed brain tissue: deeply anesthetize animals and perfuse intracardially with 0.9% saline solution followed by 4% paraformaldehyde (pH 7.4). Remove brains from skull and postfix in same fixative for 2 hour or overnight at 4 C. Then wash the brains in PBS three times for 40 minutes each or overnight at room temperature to remove any fixative in tissue. Then immerse the brains in **Golgi-Cox Solution** and store in a tightly sealed glass or plastic jar stored in dark at room temperature for 1-2 days. The volume of the solution should be approximately 10 times of volume of the tissue block.
2. Replace with fresh **Golgi-Cox Solution** after 1-2 days of immersion and continue the impregnation at room temperature in dark for 10-14 days. Impregnation longer than 20 days may lead to non-specific background staining.
3. When impregnation is complete, wash the tissue block with PBS (**for Vibratome Section**) or 30% sucrose in PBS (**for Frozen Section**) for 1-2 days. Change fresh PBS or 30% sucrose in PBS 1-2 times during the washing.
4. Cut 100-150um sections using Vibratome or Cryostat and collect the sections in distilled water. Note: to prevent section from cracking, the cryostat temperature should be around -10 C or higher.
5. Wash sections in distilled water for 3x5 min.
6. Staining the sections in **Post-Impregnation Solution** for 10 minutes.
7. Washing sections in distilled water for 3x5 min.
8. Mount sections on TruBond 380 Slide (Best adhesive slides to hold the thick sections on slides).
9. Air dry the slides at least 2 hours or overnight.

10. Dehydrate the slides in 70% ethanol and 95% ethanol for 5 minutes each and then in 2 changes of 100% ethanol for 10 minutes each.
11. Clearing the slides in 2 changes of xylene or xylene substitute for 10 minutes each.
12. Coverslip the slides with permanent mounting medium.
13. Store slides in slide box at room temperature.

Positive Control: Brain (Cortex)

Limitations: This product is intended for research use only. Interpretation of the test results is solely the responsibility of the user.

Precautions: The Impregnation Solution is hazardous and toxic so handle with care. Wear personal protective equipment to avoid contact with skin, eyes or clothing. Do not breathe vapor. Be sure to appropriately dispose of all chemical and dry waste in accordance with institutional regulations.

References